

GUJARAT TECHNOLOGICAL UNIVERSITYB.E. Sem-Vth Examination December 2010**Subject code: 152804****Subject Name: Chemical and Physical Analysis of Textiles****Date: 18 /12 /2010****Time: 03.00 pm - 05.30 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Describe how the wrap reel & an analytical balance are used for count measurement. **07**
- (b) Discuss the factors affecting the accuracy of quantitative analysis of blends. Also describe any one method used for quantitative determination of the blend content of textiles. **07**

- Q.2** (a) With the help of neat sketch, explain briefly the bursting strength tester. **07**
- (b) Write a brief note on "Measurement of Crease recovery". **07**

OR

- (b) What is saponification number? Explain determination of saponification number. **07**

- Q.3** (a) Write a brief note on "Measurement of Threads per inch in woven fabric". **07**
- (b) State the methods employed for moisture removal from fibres. Discuss any two methods in detail. **07**

OR

- Q.3** (a) Explain how, yarn unevenness is assessed by visual examination. **07**
- (b) Discuss the effect of different chemical reagent on any one natural fibre & any one synthetic fibre. **07**

- Q.4** (a) Briefly describe the rock bank twist tester. **07**
- (b) Write a brief note on "Determination of Melting point of textile fibres" **07**

OR

- Q.4** (a) Explain briefly the Wet & Dry Bulb hygrometer. **07**
- (b) Define the following terms: **07**
- i. Moisture content & Moisture Regain.
 - ii. Breaking Load & Tenacity

- Q.5** (a) With the help of neat sketch, explain the principle, construction & working of Shirley trash analyser. **07**
- (b) Explain in detail, how determination of the formaldehyde in fabric treated with cross linking agent, is done. **07**

OR

- Q.5** (a) What is bending length? How is it related with flexural rigidity and Bending modulus. **07**
- (b) How is the size content determined in textile fabrics. Also discuss the size material which is used for yarn sizing. **07**
